

REMARKS/ARGUMENTS

Claims 75 and 77–102 are pending in the above-captioned application. All of these claims stand rejected, and claims 96–102 are objected to. With this paper, claims 75, 78, 82, 87, 92, 96, and 97 have been amended, and claims 86 and 91 have been canceled. No new matter was added with the amendment.

I. Claim objections

Claims 96–102 were objected to, and the word “and” was required to be deleted from line 9 of claim 96. Claim 96 has been amended in accordance with the Examiner’s requirement, thereby bringing the claims depending from claim 96 into compliance. Claim 97 was objected to, and the word “and” was required to be inserted before the word “collecting” in line 2. Claim 97 has been amended in accordance with the Examiner’s requirement.

II. Claim rejections under 35 U.S.C. § 103(a) as being unpatentable over Wolk et al. (US 6,620,625) in view of Ezrielev et al. (US 5,476,792)

Claims 75, 77, 78, and 82–98 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Wolk et al. (US 6,620,625) in view of Ezrielev et al. (US 5,476,792). The rejection of these claims is respectfully traversed.

To warrant rejection under 35 U.S.C. § 103(a), all the claim limitations must be taught or suggested by the prior art. *See* MPEP § 2142. With regard to currently amended independent claims 75, 82, and 96, at a minimum, neither Wolk et al. nor Ezrielev et al. teach an alignment mark composition comprising a polymer excipient mixed with a dye prior to application of the composition to a chip or substrate. Claims 75, 82, and 96 have been amended to include this limitation, which clarifies that the polymer excipient and dye are mixed together in the same composition rather than being separate compositions that are merely placed in contact with one another, surface to surface. Support for the limitation can be found, for example on page 5, in paragraph 0022, and on page 19, in paragraphs 0078–0080, which show that the polymer excipient and dye are both contained within the same composition. In particular, paragraph 0078 demonstrates that the polymer and the dye are mixed together in a non-aqueous solvent that dries on the substrate to form a water insoluble mark. Thus, the

polymer and the dye are mixed together before the alignment mark composition is applied to a chip or substrate. Paragraph 0080 provides additional support for the polymer and the dye being mixed together prior to application, the polymer providing a substantially water insoluble matrix for the dye. Claims 88–90 and 93–95 also support the two materials forming a mixture, as these claims specify weight percentages of the materials in the mixture. Thus, no new matter has been added by the amendments to claims 75, 82, and 96. Claims 86 and 91, which originally included elements of the added limitations, have been canceled, and claims 87 and 92, which depended from claims 86 and 91, have been amended to depend from independent claim 82. Claim 92 has been additionally amended to add the missing word “is” in line 1 of the claim. Claim 78 has also been amended to add the missing word “is” in line 2 of the claim. No new matter was added with any of these amendments.

The Examiner has stated on page 4 of the present Office action, “Wolk et al fail to teach that the alignment marks on the substrate comprise a water insoluble polymer, a dye and a solvent.” The Examiner relies on Ezrielev et al. for this teaching. However, Ezrielev et al. do not teach a single composition that contains a polymer mixed with a dye. Rather, Ezrielev et al. teach two separate compositions: a polymer composition and a dye composition. The polymer composition is in contact with the dye composition, but the two do not combine to form a single composition, with the polymer and the dye mixed together prior to application.

The invention of Ezrielev et al. relies on these two compositions being separate, the dye composition diffusing into the polymer only when the substrate upon which the two compositions have been placed is heated. The polymer softens with the heat, allowing the polymer to diffuse into the polymer, the amount of diffusion “recording the duration of time over which a temperature has been established above a predetermined temperature.” *See* the Abstract and column 4, lines 19–27. “The dye composition may be printed or otherwise applied to the device for which the heat history is to be recorded, with the polymer composition film or coating applied directly thereover. Alternatively, the dye composition may be printed or otherwise applied, directly or indirectly, to the film or coating of the polymer composition, which may be subsequently affixed or otherwise used in combination with the device for which the heat history is to be recorded. *See* column 4, lines 28–35; as well as column 6, lines 62 and 63; column 8, lines 46–51; column 9, lines 3–5, 24 and 25; and column 10, lines 4–9. In addition, claim 1 in

column 12 specifies two separate compositions: a dye-compatible polymer composition and a polymer-compatible dye composition, the dye composition in contact with a surface of the polymer composition. The two are not mixed together in a single composition prior to application, as this would make the invention of Ezrielev et al. unworkable.

Thus, the combination of Wolk et al. and Ezrielev et al. neither teaches nor suggests all of the limitations of Applicants' amended independent claims 75, 82, and 96. Therefore, withdrawal of the rejection of these claims as being unpatentable over Wolk et al. in view of Ezrielev et al. is respectfully requested.

Claims 77 and 78 depend directly from amended independent claim 75, while claims 83–85 and 87–95 depend either directly or indirectly from amended independent claim 82, and claims 97 and 98 depend directly from amended independent claim 96. Any claim depending from a nonobvious claim is also nonobvious. *See* MPEP § 2143.03 and *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Therefore, dependent claims 77, 78, 83–85, 87–95, 97, and 98, are nonobvious. Withdrawal of the rejection of these claims as being unpatentable over Wolk et al. in view of Ezrielev et al. is, therefore, respectfully requested. As previously discussed, claims 86 and 91 have been canceled.

III. Claim rejections under 35 U.S.C. § 103(a) as being unpatentable over Wolk et al. (US 6,620,625) in view of Ezrielev et al. (US 5,476,792) and further in view of Wagner et al. (US 6,475,809)

Claims 79–81 and 99–102 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Wolk et al. (US 6,620,625) in view of Ezrielev et al. (US 5,476,792), as previously applied to claims 75–78 and 82–98, and further in view of Wagner et al. (US 6,475,809). The rejection of these claims is respectfully traversed.

As demonstrated above, Applicants' amended independent claims 75 and 96 are nonobvious over Wolk et al. in view of Ezrielev et al. Wagner et al. does not provide the limitation shown above to be missing from both Wolk et al. and Ezrielev et al.: an alignment mark composition comprising a polymer excipient mixed with a dye prior to application of the composition to a chip or substrate. Therefore, amended independent claims 75 and 96 are nonobvious over the combination of Wolk et al., Ezrielev et al., and Wagner et al. Claims 79–81

depend either directly or indirectly from amended independent claim 75, while claims 99–102 depend either directly or indirectly from amended independent claim 96. As any claim depending from a nonobvious claim is also nonobvious, dependent claims 79–81 and 99–102 are nonobvious. Withdrawal of the rejection of these claims as being unpatentable over Wolk et al. in view of Ezrielev et al. and further in view of Wagner et al. is, therefore, respectfully requested.

Conclusion

For the foregoing reasons, Applicants believe all the pending claims are in condition for allowance and should be passed to issue. If the Examiner believes that a telephone interview would expedite the examination of this application, the Examiner is requested to contact the undersigned attorney at the telephone number provided below.

Respectfully submitted,



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